

**CONTRIBUTIONS TO THE KNOWLEDGE OF THE GENUS
HARPALUS LATREILLE, 1802 FAUNA OF TURKEY
(COLEOPTERA: CARABIDAE: HARPALINAE)**

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ABSTRACT: In this study, specimens of the genus *Harpalus* Latreille, 1802 were collected from different localities of Turkey in 2000 and 2007. A total of 30 species and subspecies belonging to this genus were recorded. *Harpalus* (s.str.) *affinis* (Schrank, 1781), *H.* (s.str.) *angulatus* Putzeys, 1878, *H.* (s.str.) *distinguendus* (Duftschmid, 1812), *H.* (*Harpalophonus*) *hospes armenus* (Daniel, 1904), *H.* (s.str.) *serripes* (Quensel, 1806) and *H.* (s.str.) *smaragdinus* (Duftschmid, 1812) are the most abundant and widespread species. The first exact locality record for *H.* (s.str.) *convexus* Faldermann, 1836 is provided. In addition, the distributions of the species and subspecies in Turkey are provided with new locations for some species.

KEY WORDS: Coleoptera, Carabidae, Harpalinae, *Harpalus*, Fauna, Turkey.

The Carabidae, or ground beetles, is a huge family distributed worldwide and is an exceptionally interesting subject for various biological observations. There are more than 40 000 described species, including 2 700 species from Europe (Turin, 1981; Lövei & Sunderland, 1996). They have very variable shape and colouration and are commonly found under stones, logs, leaves, bark, debris, or foraging on the ground. Although they usually feed on insects, worms, slugs, snails, caterpillars, grubs and maggots as predators (Thiele, 1977; Stork, 1990; Luff et al., 1992), some species are omnivorous or phytophagous (Larsen et al., 2003; Löbl & Smetana, 2003). More than 1 100 species of the Carabidae have been recorded in Turkey (Casale & Taglianti, 1999) and new species are still being added to the list.

The genus *Harpalus* is one of the most speciose genera of the subfamily Harpalinae of the family Carabidae, with almost 400 species worldwide (Hurka, 1996), and 150 species in Europe (Trautner & Geigenmüller, 1987). Most species of this genus are partly or preferably phytophagous, at least as the imago (Trautner & Geigenmüller, 1987). They are found in unshaded habitats, including steppe, vineyards, fields, fallows; and lowlands and hills (Hurka, 1996). Turkey is a rich area in respect to species of this genus. A list of 56 species was provided by Casale & Taglianti (1999).

Many researchers have worked on the genus *Harpalus* in Turkey, including Kataev (1993), Kataev & Wrase (1995), Kataev & Wrase (1997), Casale & Taglianti (1999), Kesdek & Yıldırım (2003), Kocatepe & Mergen (2004) and Avgin & Emre (2007). The aim of this study was to compile a list of species of the genus *Harpalus* in Turkey with locality information.

MATERIALS AND METHODS

The carabid material was collected from different localities and altitudes in Turkey, including from under stones and on open ground by hand and with an insect aspirator in 2000 and 2007. Material was identified by Dr. Claude Jeanne in France, Dr. David W. Wrase in Germany and the author. Provinces where the specimens were collected are given in alphabetical order. The specimens are deposited in the Entomology Museum, Erzurum, Turkey (EMET) and in the collection of the author at the Ali Sitki Mefharet Koçman Vocational School in Fethiye, Muğla, Turkey.

RESULTS

In this study, a total of 30 species and subspecies belonging to the genus *Harpalus* are reported from Turkey. Among them, *Harpalus* (s.str.) *affinis* (Schrank, 1781), *H.* (s.str.) *angulatus* Putzeys, 1878, *H.* (s.str.) *distinguendus* (Duftschmid, 1812), *H.* (*Harpalophonus*) *hospes armenus* (Daniel, 1904), *H.* (s.str.) *serripes* (Quensel, 1806) and *H.* (s.str.) *smaragdinus* (Duftschmid, 1812) are the most abundant and widespread species. An exact locality record for *H.* (s.str.) *convexus* Faldermann, 1836 is also reported for the first time. The species and subspecies of *Harpalus* are given in alphabetical order in the following list:

GENUS *HARPALUS* LATREILLE, 1802

Harpalus (s.str.) *affinis* (Schrank, 1781)

Material examined: **Ardahan:** 20 km North, 2445 m, 2 exs., 11.VI.2005; 1 ex., 18.VIII.2004; Göle, 13 km South, 1870 m, 2 exs., 18.VIII.2004; 20 km West, 1900 m, 2 exs., 11.VI.2005; Türkeşin, 1970 m, 5 exs., 25.VII.2005; Hanak, 1820 m, 1 ex., 15.X.2005; Posof, Aşıkzülali, 1960 m, 7 exs., 26.VII.2005; Ilgar Pass, 2350 m, 2 exs., 18.VIII.2004. **Artvin:** Genya Mountain, 1780 m, 1 ex., 10.VI.2005; 1 ex., 2.VII.2004; Şavşat, Çamlıbel Pass, 2250 m, 2 exs., 4.VIII.2005; Düzenli, 1700 m, 9 exs., 11.VI.2005; Yavuzköy, 1680 m, 1 ex., 11.VI.2005. **Erzurum:** Dadaşkent, 1840 m, 1 ex., 11.VI.2005; Dadaşköy, 1800 m, 2 exs., 8.VI.2005; 2 exs., 17.VI.2004; 6 exs., 14.VIII.2004; 4 exs., 18.VIII.2004; Dutçu, 1900 m, 1 ex., 21.VII.2004; Konaklı, 2150 m, 2 exs., 2.VII.2004; Palandöken Mountain, 2050 m, 1 ex., 7.VII.2005; 1 ex., 26.VIII.2004; Tepeköy, 1900 m, 2 exs., 19.IX.2005; Umudum Plateau, 2100 m, 1 ex., 26.VII.2004; Aşkale, Pirnakapan, 1920 m, 1 ex., 14.X.2004; Oltu, 1350 m, 1 ex., 8.V.2006; Pasinler, Hamamderesi, 1800 m, 1 ex., 7.V.2006; Şenkaya, Çakırbaba Pass, 2450 m, 1 ex., 4.IX.2004; 1 ex., 12.X.2005; Tortum, Aksu, 1800 m, 1 ex., 17.V.2004; Güzelyayla Pass, 2128 m, 1 ex., 4.X.2005; Kazandere, 1990 m, 1 ex., 18.VII.2004; Uzundere, Yayla Pass, 2350 m, 2 exs., 13.V.2005. **Kars:** 3 km North, 1910 m, 1 ex., 3.VIII.2005; Digor, Değirmendere, 1800 m, 2 exs., 17.VII.2005; Kağızman, Yukarısultanlı, 1300 m, 1 ex., 17.V.2005; Sarıkamış, 3 km East, 1360 m, 1 ex., 7.X.2005; Karakurt, 1550 m, 1 ex., 18.IV.2004; Karaorgan, 1760 m, 1 ex., 2.VI.2005; Şeytangeçmez, 1775 m, 1 ex., 14.VI.2004; Yenigazi, 1920 m, 1 ex., 16.X.2005; Yeniköy, 2200 m, 1 ex., 12.X.2005; Susuz, 20 km North, 1975 m, 4 exs., 25.VII.2005. **Trabzon:** Beşikdüzü, 1 ex., 15.X.2004.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Ardahan, Artvin, Kars, Trabzon (Kesdek & Yıldırım, 2003); Ankara (Kocatepe & Mergen, 2004).

Harpalus (s.str.) *albanicus* Reitter, 1900

Material examined: **Erzurum:** Aşkale, Kop Pass, 2150 m, 1 ex., 6.VI.2006; Oltu, Çamlıbel, 1750 m, 1 ex., 17.V.2004. **Kars:** Sarıkamış, Karakurt, 1775 m, 1 ex., 20.IV.2006. **Yalova:** 1 ex., 24.VII.2003.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Kahramanmaraş (Avgın & Emre, 2007).

***Harpalus (s.str.) anatolicus* Tschitschérine, 1898**

Material examined: **Erzurum:** Dadaşkent, 1840 m, 1 ex., 11.VI.2005; Uzundere, Yayla, 1800 m, 5 exs., 17.V.2004; 1 ex., 28.IX.2004. **Kars:** Sarıkamış, Karakurt, 1550 m, 2 exs., 18.IV.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

This species is endemic to Asiatic Turkey.

***Harpalus (s.str.) angulatus* Putzeys, 1878**

Material examined: **Ardahan:** Posof, Aşıkzülali, 1960 m, 1 ex., 26.VII.2005. **Artvin:** Şavşat, Yavuzköy, 1680 m, 2 exs., 11.VI.2005. **Bayburt:** Aşağı Kop, 1950 m, 5 exs., 25.VI.2006. **Erzurum:** Tekederesi, 2150 m, 1 ex., 12.VI.2006; 4 exs., 13.VI.2005; 1 ex., 1.X.2004; Atatürk University field, 1850 m, 1 ex., 29.IV.2004; Aşkale, 1600 m, 1 ex., 27.IV.2004; Hınıs, Ömerli, 1780 m, 1 ex., 22.VII.2005; Köprüköy, Kayabaşı, 1450 m, 1 ex., 14.VI.2004; Oltu, Çamlıbel, 1430 m, 1 ex., 17.V.2004; Pazaryolu, 25 km South, 1930 m, 2 exs., 14.X.2004; 2 exs., 21.X.2004; Şenkaya, Çakırbaba Pass, 2450 m, 1 ex., 9.VIII.2005; Uzundere, Yayla Pass, 2350 m, 2 exs., 13.V.2005. **Kars:** Digor, Yeniköy, 1695 m, 1 ex., 4.V.2004; Sarıkamış, 10 km East, 1460 m, 1 ex., 7.X.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

***Harpalus (s.str.) anxioides* Kataev, 1991**

Material examined: **Erzurum:** Abdurrahmangazi, 2170 m, 4 exs., 8.VIII.2005; Horasan, 1760 m, 2 exs., 13.V.2005; Uzundere, Yayla Pass, 2350 m, 3 exs., 13.V.2006. **Yalova:** 1 ex., 23.VII.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Erzurum (Kesdek & Yıldırım, 2003).

This species is endemic to Asiatic Turkey.

***Harpalus (s.str.) attenuatus* Stephens, 1828**

Material examined: **Artvin:** Şavşat, Yavuzköy, 1680 m, 1 ex., 11.VI.2005. **Bayburt:** Aşağı Kop, 1870 m, 1 ex., 25.VI.2006. **Erzurum:** Narman, 20 km Southeast, 1780 m, 1 ex., 16.IV.2004; Oltu, Başaklı, 1730 m, 1 ex., 13.VII.2005; Subatık, 1330 m, 1 ex., 28.III.2004.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Bingöl, Erzurum, Sinop (Kesdek & Yıldırım, 2003); Kahramanmaraş (Avgin & Emre, 2007); İzmir (Anlaş & Tezcan, 2010; Tezcan et al., 2011).

***Harpalus (s.str.) caspius* Steven, 1806**

Material examined: **Ardahan:** 2 km East, 1890 m, 1 ex., 25.VII.2005. **Bayburt:** Kop Pass, 1950 m, 3 exs., 25.VI.2006. **Erzurum:** Dadaşköy, 1800 m, 1 ex., 17.VII.2004; Atatürk University field, 1850 m, 1 ex., 3.IV.2004; Uzundere, Yayla, 1800 m, 2 exs., 17.V.2004; 3 exs., 28.IX.2004. **İğdır:** Tuzluca, Üçkaya, 1010 m, 2 exs., 29.VI.2003. **Kars:** Sarıkamış, Karaçuha, 1900 m, 1 ex., 27.V.2003; Karakurt, 5 km South, 1780 m, 1 ex., 16.V.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Kahramanmaraş (Avgin & Emre, 2007).

***Harpalus (Harpalophonus) circumpunctatus* (Chaudoir, 1846)**

Material examined: **Bayburt:** Aşağı Kop, 1950 m, 1 ex., 25.VI.2006. **Erzurum:** Çat, 1800 m, 1 ex., 12.IV.2004; Karayazı, Karaağıl, 1875 m, 1 ex., 26.X.2005.

Distribution in Turkey: Kayseri, Konya (Ganglbauer, 1905); Anatolia (No locality) (Casale & Taglianti, 1999).

***Harpalus (s.str.) convexus* Faldermann, 1836**

Material examined: **Erzurum:** Palandöken Mountain, 2200 m, 1 ex., 23.IV.2005; 2 exs., 15.V.2005; 1 ex., 23.V.2005; 1 ex., 12.VI.2005; Tekederesi, 1900 m, 2 exs., 13.VI.2005; Tuzcu, 1910 m, 3 exs., 17.VII.2004; 1 ex., 8.IX.2004; Atatürk University field, 1850 m, 1 ex., 27.V.2004; 5 exs., 4.VI.2005; Aşkale, Ortabahçe, 1790 m, 1 ex., 1.IX.2004; Pırnakapan, 1900 m, 1 ex., 30.IV.2005; 1 ex., 27.V.2004; Köprüköy, 2 km East, 1750 m, 3 exs., 27.V.2004; Oltu, Çamlıbel, 1750 m, 1 ex., 17.V.2004; Sarısaz, 1720 m, 1 ex., 18.IV.2005; Pasinler, 4 km East, 1730 m, 1 ex., 16.X.2004; Hamamderesi, 1850 m, 1 ex., 20.IV.2005. **Kars:** Digor, 20 km South, 1730 m, 1 ex., 17.V.2005; Yeniköy, 1695 m, 1 ex., 4.V.2004; Kağızman,

Aydıncavak, 1500 m, 1 ex., 3.VI.2004; Değirmendere, 1370 m, 1 ex., 17.V.2005; Sankamış, Akkurt, 1350 m, 3 exs., 4.VI.2004; Karakurt, 1670 m, 1 ex., 18.V.2005; 1450 m, 1 ex., 3.VI.2004; 1575 m, 1 ex., 19.VI.2004; Şeytangeçmez, 2 exs., 14.VI.2004.

Distribution in Turkey: East of Turkey (No locality) (Kataev, 2002).

This species is widely distributed in Transcaucasia from East Turkey to West Kopetdagh (Kataev, 2002). Thus, The first exact locality record for this species is provided in this study.

Harpalus (s.str.) distinguendus (Duftschmid, 1812)

Material examined: **Ardahan:** Göle, 20 km West, 1900 m, 1 ex., 11.VI.2005. **Erzincan:** 5 km East, 1325 m, 1 ex., 8.VIII.2004. **Erzurum:** Dadaşköy, 1800 m, 2 exs., 4.VI.2005; 2 exs., 16.VII.2004; 2 exs., 14.VIII.2004; Dutçu, 1910 m, 1 ex., 21.VI.2004; Atatürk University field, 1850 m, 1 ex., 11.V.2005; 2 exs., 17.V.2004; Aşkale, Pırnakapan, 1870 m, 2 exs., 3.VI.2006; Karayazı, Yeniköy, 1820 m, 1 ex., 26.X.2005; Şenkaya, Çakırbaba Pass, 2450 m, 1 ex., 18.VIII.2008; Uzundere, Yayla Pass, 1800 m, 1 ex., 17.V.2004. **İğdir:** 4 km South, 1250 m, 1 ex., 4.VI.2004. **Kars:** Sarıkamış, Şeytangeçmez, 1755 m, 1 ex., 14.VI.2004. **Konya:** Güneysınır, Güragaç, 1020 m, 1 ex., 11.VII.2007.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Ankara, Antalya, Erzurum, Trabzon (Kesdek & Yıldırım, 2003, Kocatepe & Mergen, 2004); Gaziantep, Kahramanmaraş, Sivas (Avgın & Emre, 2007); İzmir (Tezcan et al., 2011).

Harpalus (s.str.) flavicornis Dejean, 1829

Material examined: **Erzurum:** Umudum Plateau, 2100 m, 1 ex., 26.VII.2003; Tuzcu, 1910 m, 1 ex., 21.VI.2004; Oltu, Başaklı, 2050 m, 1 ex., 13.VII.2005; Uzundere, Yayla Pass, 2340 m, 1 ex., 12.V.2005; 2 exs., 14.V.2006.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

Harpalus (s.str.) fuscicornis Ménétriés, 1832

Material examined: **Erzurum:** Dutçu, 1900 m, 1 ex., 21.VI.2004; Palandöken Mountain, 2150 m, 1 ex., 19.V.2005; Şenkaya, Çakırbaba Pass, 2450 m, 1 ex., 9.VIII.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Artvin, Denizli, Erzurum (Kesdek & Yıldırım, 2003).

Harpalus (s.str.) fuscipalpis Sturm, 1818

Material examined: **Bingöl:** Karhova, Köklü, 1600 m, 1 ex., 6.VI.2003. **Erzurum:** Atatürk University field, 1850 m, 1 ex., 12.V.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Artvin, Erzurum, Konya (Kesdek & Yıldırım, 2003).

Harpalus (s.str.) honestus (Duftschmid, 1812)

Material examined: **Artvin:** Genya Mountain, 2150 m, 1 ex., 12.VII.2004; Şavşat, 1300 m, 1 ex., 19.VIII.2004. **Trabzon:** 1 ex., 20.VII.2004.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

Harpalus (Harpalophonus) hospes armenus (Daniel, 1904)

Material examined: **Ardahan:** Göle, Türkeşin, 1970 m, 1 ex., 25.VII.2005. **Bayburt:** Aşağı Kop, 1950 m, 4 exs., 25.VI.2006; Kop Pass, 1970 m, 1 ex., 7.IX.2004. **Erzurum:** Dadaşköy, 1800 m, 1 ex., 16.VII.2004; 1 ex., 17.VII.2004; Aşkale, Pırnakapan, 1950 m, 1 ex., 27.V.2004; 1920 m, 1 ex., 14.X.2004; Çat, 1970 m, 4 exs., 28.III.2005; Yavi, 1850 m, 8 exs., 21.V.2004; Yukarıçat, 1840 m, 2 exs., 21.V.2004; Himis, Söylemez, 1750 m, 1 ex., 28.VI.2005; Ilıca, Yoncalık, 1730 m, 1 ex., 21.X.2004; Oltu, Çamlıbel, 1750 m, 1 ex., 17.V.2004; Şenkaya, Çakırbaba Pass, 2450 m, 1 ex., 18.VIII.2004; Tortum, Esendurak, 1150 m, 1 ex., 10.V.2006; Uzundere, Yayla, 1800 m, 5 exs., 10.IV.2004; 1 ex., 28.IX.2004. **Kars:** 3 km North, 1910 m, 1 ex., 3.VIII.2005; Kağızman, Aydıncavak, 1500 m, 1 ex., 3.VI.2004; Sarıkamış, Akkurt, 1350 m, 2 exs., 4.VI.2004; Karakurt, 1575 m, 1 ex., 19.VI.2004; Şeytangeçmez, 2 exs., 14.VI.2004; Susuz, Taşlıdere, 1890 m, 1 ex., 25.VII.2005. **Konya:** Güneysınır, Örenboyalı, 1050 m, 1 ex., 28.II.2007.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Adıyaman, Kahramanmaraş (Avgın & Emre, 2007).

***Harpalus (s.str.) kazanensis* Jedlicka, 1958**

Material examined: **Erzurum:** Atatürk University field, 1850 m, 1 ex., 6.VII.2005; Çat, Yavi, 1870 m, 12 exs., 21.V.2004; 12 exs., 18.IX.2004; Uzundere, Yayla Pass, 2350 m, 1 ex., 13.V.2006.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

***Harpalus (s.str.) latus* (Linnaeus, 1758)**

Material examined: **Ardahan:** Çamlıbel Pass, 2445 m, 1 ex., 11.VI.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

***Harpalus (s.str.) pulvinatus lubricus* Reitter, 1900**

Material examined: **Kars:** Sarıkamış, Çardakçatı, 1350 m, 1 ex., 17.V.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

***Harpalus (Actephilus) pumilus* (Sturm, 1818)**

Material examined: **Ardahan:** Posof, Ilgar Pass, 2450 m, 1 ex., 13.VII.2004. **Erzurum:** Haydarlı, 1900 m, 1 ex., 4.VII.2005; Tekederesi, 1900 m, 1 ex., 13.VI.2005; Umudum Plateau, 2100 m, 2 exs., 26.VII.2003. **Gümüşhane:** Kale, 5 km South, 1 ex., 2.IV.2002. **Kars:** Sarıkamış, Karakurt, 10 km West, 1770 m, 1 ex., 20.IV.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

***Harpalus (s.str.) pygmaeus* Dejean, 1829**

Material examined: **Erzurum:** Umudum Plateau, 2100 m, 8 exs., 26.VII.2003; Oltu, Başaklı, 1700 m, 2 exs., 28.III.2005.

Distribution in Turkey: Kocaeli (Bodemeyer, 1900); Anatolia (No locality) (Casale & Taglianti, 1999).

***Harpalus (s.str.) quadratus* Chaudoir, 1846**

Material examined: **Erzurum:** Dadaşkent, 1800 m, 1 ex., 11.V.2004; Çat, Yukarıçat, 1890 m, 1 ex., 21.V.2004; Karayazı, Karaağıl, 1875 m, 1 ex., 26.X.2005.

Distribution in Turkey: Kars (first recorded, col., Lodos) (Öncüler, 1991); Anatolia (No locality) (Casale & Taglianti, 1999); Ardahan (Kesdek & Yıldırım, 2003).

***Harpalus (s.str.) reflexus reflexus* Putzeys, 1878**

Material examined: **Bayburt:** Kop Pass, 1950 m, 1 ex., 25.VI.2006. **Erzurum:** Tekederesi, 1900 m, 1 ex., 13.VI.2005; 1 ex., 1.X.2004; Tuzcu, 1910 m, 1 ex., 17.VII.2004; Oltu, Çamlıbel, 1750 m, 1 ex., 17.V.2004.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

***Harpalus (s.str.) rubripes* (Duftschmid, 1812)**

Material examined: **Erzurum:** Oltu, Sarsaz, 1720 m, 1 ex., 16.VI.2006; Şenkaya, Sındıran, 1950 m, 1 ex., 24.V.2005; Tortum, Söğütlü, 1750 m, 1 ex., 12.V.2004; Uzundere, Yayla Pass, 2450 m, 3 exs., 13.V.2006. **Iğdır:** Tuzluca, Üçkaya, 1500 m, 2 exs., 29.VI.2003. **Kars:** Sarıkamış, Karakurt, 1775 m, 1 ex., 2.VIII.2005.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Ardahan, Erzurum, Kars (Kesdek & Yıldırım, 2003).

***Harpalus (s.str.) saxicola* Dejean, 1829**

Material examined: **Erzurum:** Aşkale, Pırnakapan, 1870 m, 3 exs., 3.VI.2006. **Iğdır:** 10 km Southeast, 1250 m, 1 ex., 4.VI.2004. **Konya:** Güneysınır, Örenboyalı, 1060 m, 1 ex., 28.III.2002.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

***Harpalus (s.str.) serripes* (Quensel, 1806)**

Material examined: **Artvin:** Şavşat, Yavuzköy, 1680 m, 1 ex., 11.VI.2005. **Erzincan:** Tercan, Yaylacık, 1650 m, 2 exs., 25.V.2005; Üzümlü, Akyazı, 1350 m, 1 ex., 26.V.2005. **Erzurum:** Atatürk University field, 1850 m, 1 ex., 14.IV.2005; 2 exs., 21.V.2005; Börekli, 2125 m, 1 ex., 7.VII.2005; Dutçu, 2100 m, 2 exs., 19.V.2005; Konaklı, 2150 m, 1 ex., 2.VII.2004; Aşkale, Ortabahçe, 1965 m, 1 ex., 4.VII.2005; Köprüköy, 2 km East, 1750 m, 1

ex., 27.V.2004; Tortum, Aksu, 1800 m, 2 exs., 17.V.2004; Tuzluk, 1750 m, 1 ex., 24.V.2005. **İğdir:** Tuzluca, Gaziler, 1020 m, 1 ex., 16.V.2005. **Kars:** Digor, Bostanlı, 1780 m, 1 ex., 17.VII.2005; Kağızman, Yukarisultanlı, 1300 m, 1 ex., 17.VI.2005; Sarıkamış, 10 km West, 1770 m, 2 exs., 20.IV.2005; Çardakçatı, 1350 m, 1 ex., 17.V.2005. **Konya:** Bozkr, Belören, 1100 m, 2 exs., 21.VII.2007; Güneysınır, Gurağaç, 1020 m, 2 exs., 13.VII.2007.

Distribution in Turkey: Eskişehir (Türkkan, 1998); Anatolia (No locality) (Casale & Taglianti, 1999); Amasya, Ankara, Erzincan, Erzurum, Kars, Kayseri, Konya, Muğla (Ganglbauer, 1905; Kesdek & Yıldırım, 2003); Adıyaman, Kahramanmaraş, Sivas (Avgin & Emre, 2007).

Harpalus (s.str.) smaragdinus (Duftschmid, 1812)

Material examined: **Ardahan:** Çamlıbel Pass, 2445 m, 2 exs., 11.VI.2005. **Artvin:** Genya Mountain, 1780 m, 3 exs., 10.VI.2005; Şavşat, 1300 m, 1 ex., 19.VIII.2004; Yusufeli, Zeytinlik, 280 m, 1 ex., 10.VI.2005. **Erzurum:** Tekederesi, 1900 m, 4 exs., 13.VI.2005; Umudum Plateau, 2100 m, 1 ex., 26.VII.2003; Çat, Yavi, 1850 m, 1 ex., 21.V.2004; Karayazı, Çatalören, 1840 m, 1 ex., 26.X.2005; Tortum, Esendurak, 1150 m, 1 ex., 10.VIII.2004.

İğdir: Doğubeyazıt, 10 km Southeast, 1250 m, 1 ex., 4.VI.2004.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999); Ardahan, Artvin, Erzurum (Kesdek & Yıldırım, 2003); Kahramanmaraş, Malatya, Sivas (Avgin & Emre, 2007); İzmir (Anlaş & Tezcan, 2010; Tezcan et al., 2011).

Harpalus (s.str.) smymensis medicus Kataev, 1993

Material examined: **Erzurum:** Tepeköy, 1900 m, 1 ex., 19.IX.2005; Umudum Plateau, 2100 m, 1 ex., 26.VII.2003; Aşkale, Köp Pass, 2300 m, 1 ex., 14.X.2004; Pırnakapan, 1920 m, 1 ex., 14.X.2004; Çat, Yavi, 1850 m, 1 ex., 21.V.2004; Yukarıçat, 1900 m, 2 exs., 21.V.2004; İlca, Atlıkonak, 1950 m, 1 ex., 11.VI.2004; Pasinler, 1 ex., 2.VIII.2004; 4 km Southwest, 1800 m, 1 ex., 2.VII.2005; Hamamderesi, 1800 m, 1 ex., 20.IV.2003; 1 ex., 7.X.2004; Şenkaya, Çakırbaba Pass, 1 ex., 12.VII.2005; Tortum, Güzelyayla Pass, 2128 m, 2 exs., 4.X.2005. **Kars:** Kağızman, 15 km East, 1115 m, 1 ex., 17.V.2005; Sarıkamış, Karakurt, 1550 m, 1 ex., 18.IV.2004.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

This subspecies is endemic to Asiatic Turkey.

Harpalus (s.str.) smymensis raddei Tschitschérine, 1897

Material examined: **Artvin:** Genya Mountain, 1780 m, 1 ex., 12.VII.2004. **Bayburt:** Aşağı Köp, 1950 m, 1 ex., 25.VI.2006.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

This subspecies is endemic to Asiatic Turkey.

Harpalus (s.str.) subcylindricus Dejean, 1829

Material examined: **Erzincan:** Üzümlü, Günebakan, 1350 m, 2 exs., 25.V.2005. **Erzurum:** Tekederesi, 1950, 1 ex., 26.VI.2005; Tuzcu, 1900 m, 1 ex., 17.VII.2004; Umudum Plateau, 2100 m, 5 exs., 26.VII.2003; Aşkale, Pırnakapan, 1750 m, 3 exs., 2.IV.2005; 3 exs., 27.V.2004; 1 ex., 17.VI.2006; Çat, Yukarıçat, 1870 m, 1 ex., 21.V.2004; Köprüküyü, 2 km East, 1 ex., 17.V.2005; Uzundere, 1520 m, 1 ex., 12.V.2006. **Kars:** Sarıkamış, Karakurt, 1775 m, 2 exs., 20.IV.2006; Şeytangeçmez, 1755 m, 1 ex., 14.VI.2004.

Distribution in Turkey: Anatolia (No locality) (Casale & Taglianti, 1999).

Harpalus (s.str.) zabroides Dejean, 1829

Material examined: **Erzurum:** Atatürk University field, 1850 m, 1 ex., 27.V.2004; Dutçu, 2100 m, 1 ex., 19.V.2005; Uzundere, Yayla, 1800 m, 1 ex., 17.V.2004.

Distribution in Turkey: Kars (first recorded, col., Lodos) (Öncüer, 1991); Anatolia (No locality) (Casale & Taglianti, 1999).

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